

2

## REPORT

### ON THE ATTACK OF EPIDEMIC CHOLERA, IN THE AGRA AND GWALIOR CIRCLE DURING THE YEAR 1862.



CHOLERA was prevalent in Rajpootana, during the hot season, and it was reported on the 22nd June, to be present with a party of Pilgrims proceeding from the Deccan to Muttra. They were halted, twelve miles off, and put under Quarantine till the disease disappeared.

There were two cases in H. M.'s 35th Regiment at AGRA, on the 29th, and one on the 30th June. Tents were immediately pitched and cots placed for 400 men, in the vicinity of the Taj and Secundra. There was no fresh case until the 30th July, when one man was seized in the Fort, in H. M.'s 35th Regiment.

There were eleven cases in Cantonments, on the 2nd and 3rd August (ten of which proved fatal.) On the following day, the 4th August, two Companies moved into the Camp at Secundra in the morning, and two moved to the Camp at the Taj in the evening; and on the 5th and 6th two more Companies moved out. Two Companies, with the sick women and children, remained in Cantonments.

In the Secundra Camp there were five cases, three of which proved fatal up to the 8th, when they changed ground. There was no fresh case till the 14th. The disease re-appeared amongst the Convalescents from Cantonments, who joined the Camp on the 12th. They changed ground three times, but fresh cases appeared, to the number of fifteen (of which eleven proved fatal) up to the 23rd August, when it was in contemplation to send them across the river Junna, and by Rail to Shekoabad. The disappearance of the disease, however, rendered this unnecessary. In the Taj party, there were only three cases during the first three days. After the first day, they removed into the side buildings at the Taj; but there were four cases on the 7th, and they moved into their Tents on the 8th, when there were four cases, and crossed the river to the vicinity of the Ram Bagh on the 9th. There were seven cases the following three days; after which there were only five cases, of which three proved fatal, before their return to Cantonments.

Cases still appeared in Cantonments amongst the sick in Hospital, and in the Barraeks on the 7th, 8th and 9th. It was proposed to send them, with the women and children, to Camp on the Artillery praetiso ground; but the earriago indented for could not be supplied. However, as the Secundra Camp had been free for several days, a party of fifty-one Convalescents was sent there on the 11th, and another party of 102, including all the sick who could be

moved without danger, were sent out on the 14th, leaving 18 men in Hospital, and the women and children in the Barracks.

The remainder of the healthy men, joined the Head Quarters at Ram Bagh. There was one case in Cantonments after this date in a man who had been in attendance on his wife in Hospital. He was attacked on the 20th, and died in six hours.

The Barracks were fumigated, white-washed, and cleaned out before the troops returned.

One woman died of the disease on the 11th, another woman, who saw the dead body, was seized with vomiting, purging and cramps, three hours afterwards; and another woman who attended on her, was affected on the 12th, and recovered with difficulty.

There was no case of cholera amongst the children, three of whom died from Diarrhœa.

The sick from the Secundra Camp returned to Cantonments on the morning, and those from the Ram Bagh on the evening, of the 28th. The troops from the Secundra Camp returned to Cantonments on the morning, and those from the Ram Bagh Camp on the evening, of the 1st September. There has been no return of the disease, since returning from Camp.

One officer, forty-nine men, and one woman have died, total fifty-one, which is 3·86 per cent., on the total strength 1,319. The loss amongst the men 1,108, is 4·42 per cent.

There were some suspicious cases in the Artillery Division, but none proved fatal, as they were checked in the premonitory stage.

At GWALIOR the disease appeared amongst the women and children of the Artillery, on the 8th July. There were two or three cases every day till the 12th, when the Horse Artillery moved to the Phool Bagh. There was not a single case in this Detachment, and only one more in the Artillery during the month of July. In August there were two cases, one of which proved fatal, and three in September, one of which proved fatal. There were in all nine cases amongst the men, of which two proved fatal, five, amongst the women of which three proved fatal and two amongst the children, which both proved fatal, equal to a mortality of 2·16 per cent., on the total strength of 323, or 0·77 per cent., on strength of the men 259.

I joined at Morar on the 15th July. The first case in H. M.'s 13th Light Infantry, appeared on the 10th July. There were only five cases up to the 17th, and these were from one company which moved into Camp on the 16th. During the 18th there were four fatal cases, and four more during the night, two of which proved fatal. Two companies from the Barracks most infected, moved into Camp at Goorgaon on the morning, and one more company in the afternoon of the 19th. There were two cases in this camp the day they arrived, one of which died, and one the following day which recovered. There was another case in the Quarter Master Serjeant, who was occupied arranging boxes, &c., in the Barracks, which had been vacated. He said he was quite well in the morning, and felt uncomfortable when in the Barrack; and he was seized with vomiting and purging a few hours after. There was no fresh case, after this date, either in Cantonments or in the Camp, up to the 27th, when I left to return to Agra. There was an exacerbation of the disease in Her Majesty's 13th, on the 1st of August, when the remainder of the Corps moved into Camp. There were a considerable number of cases both of Cholera and of Diarrhœa during the month which prevented their return to Cantonments. Occasional cases of Cholera continued to appear up to the 18th of September, and there were three slight cases in the Hospital in the middle of October, 37 men, 2 women and 7 children have died, total 46, which is 5·07 per cent. on the total strength 907, the loss amongst the men 821, is 4·63 per cent.

There had been several suspicious cases of Diarrhœa, but no case of cholera in the Detachment of Her Majesty's 52nd Light Infantry, in the Fortress of Gwalior previous to my departure. The first case appeared on the 28th, and there was another on the 31st, two on the 2nd, and five on the 3rd August, when they moved into the Phool Bagh. There were only three cases during the next four days. They changed ground to tents at Oodeypore on the 8th. The disease continued, though in a less fatal form till the 15th, when the last case appeared. The total loss in the Detachment of Her Majesty's Light Infantry is nineteen men, two women and three children, total 24, equal to 8.30 per cent. on the total strength of 289, or of 8.08 per cent. of the strength of the men 235.

JHANSI.—The first case appeared in Her Majesty's 52nd Light Infantry on the 22nd July, and the last case on the 15th August. The deaths were 29 men, one woman, and four children, total 34, equal to 4.77 per cent. on the total strength of 712, and 4.83 per cent. on the strength of the men viz : 600.

The first case in the Artillery occurred on the 1st August, and the last case on the 9th August, the mortality was seven men, and one child, total 8, equal to 6.09 per cent on the strength of the men viz : 104 and 5.80 per cent. on the total strength of 138.

The disease was prevalent amongst the natives in the city of Jhansi, before it appeared in Cantonments.

At MUTTRA there were several suspicious cases, but none fatal in Her Majesty's 20th Hussars. The total mortality among the European Troops in this circle, has been one officer, 143 men, 10 women, 16 children.

The *Native Troops* were scarcely affected in any station in this circle. In no Corps was there more than one or two sporadic cases. In 16 Corps of the strength of 10,004, there were only 16 cases, of which 10 proved fatal.

The *Prisoners* were not affected with the exception of Agra and Ajmeer. The disease appeared in the Central Prison at Agra, on the 10th of August. There were three cases the following day, and next day 500 men moved into Camp on the Pooyah Ghat road, and 500 more on the 16th, and 50 men sent to Secundra. The last case was on the 18th; and no case appeared at Secundra. The total mortality was 12, equal to 0.45 per cent. on the strength of 2,667. This contrasts favorably with former attacks, in which the prisoners were not moved into Camp so promptly. The mortality in 1860 was 178 and in 1861 it was 66.

It appeared among the prisoners at AJMEER, in June, and continued during July and August. There were 23 cases, of which 11 proved fatal out of a strength of 196. There were only two cases, one of which proved fatal, in the six other Jails in this Circle.

There were a few cases of Cholera in the Agra and Gwalior *districts*, and in Rajpootana; but the disease was not general, nor in an epidemic form, with the exception of Jhansi, where it was severe for some time before the European Troops were attacked.

In reference to the means employed to check the disease, and to avoid the attack, the most marked benefit was derived from *change of air*, by moving out of Barracks, and changing ground in Camp. This is clearly shown by the great diminution of cases after moving from Cantonments at Morar, in H. M.'s 13th Light Infantry on the 19th July, and at Agra in H. M.'s 35th on the 4th August, and by the change of Camp in H. M.'s 35th across the river on the 19th August, and at Gwalior, in H. M.'s 52nd on the 4th August, and also by the movement of the prisoners from the Jail at Agra, on the 12th August. The great benefit is not confined to removing the men, from a tainted locality; it occupies their minds and prevents their desponding, and resorting to improper remedies. It also diminishes the numbers that remain.



The great benefit of the use of remedies, on the first appearance of looseness, or indigestion, was as strongly marked, as the inefficiency of any remedies, after *collapse* had supervened. In *those cases* when reaction took place, it appeared to be a *stage of the disease, or an effort of nature*. Alcoholic stimuli did *not* promote it, and those cases progressed most favorably, where they had not been used; whilst the reactionary fever was very dangerous, where they were freely given; inducing affection of the head, which generally proved fatal. The old Cholera Pill was most extensively used, with very favorable results. They were placed in each Barrack, under charge of the Sergeants, with instructions to give one to any man who applied; but if any one applied a second time, he was to be sent to Hospital. Any man whose bowels were open *after* tattoo was to get a pill, and if his bowels were again open, he was to get a second pill, and be sent to Hospital. Small bleedings were tried by Dr. Plank, without any marked benefit; small doses of Quinine were generally used in the morning, and the men inspected by a Medical Officer. Small fires of greenwood were kept up in Hospital, and charcoal fires in the Barracks. The Military duties were diminished as far as practicable, and the men encouraged to divert themselves. Natives were employed to champoo the severe cases, to fan them, and to attend to their wants. Six champooers were told off to each bad case, with one waiting man, a European soldier to superintend. The Champooers have answered admirably. I took care that they were well used, and only three ran off out of 75, and few of the other hospital servants deserted. It was a heart-felt relief to me, to see four of them steadily and carefully rubbing a poor cramped dying man, instead of four European soldiers, who might soon be in the same hopeless case, in consequence, and who thought so—none of the Champooers were attacked by the disease.

The reappearance of the disease in the Secundra party may be attributed to the Convalescents who joined from Cantonments. On future occasions, the sick and convalescents should be sent to a separate Camp.

The ratio of deaths to cases in most of these returns is very high, arising from only the cases which advanced to the stage of *collapse* being called Cholera, by some of the Medical officers. Some Officers think that it would alarm the men to call the earlier stages Cholera. This may cause inconvenience, but there is danger in attempting to conceal the real name. When successful, it lulls the men into a false security, till the disease has advanced beyond cure, and not only sacrifices the life of the sufferer, but he may engender and spread the fatal disease among his comrades. I have always gained the confidence of the men by a candid statement of the nature of the disease, with a confident assurance of its being remediable IN THE EARLY STAGE, whilst allowing that the advanced stages were little under the power of the Surgeon. They have resorted freely to the remedies recommended, and I have had constant reports from Officers, Non-Commissioned Officers and men of the decided benefit they had derived. I attribute much of the immunity of the 20th Hussars at Muttra, and of the Artillery at Agra, to this practice having been early pursued. Loud assertions of the non-existence of Cholera do not prevent the men suspecting its presence, and flying to Grog as the best remedy they know.

The objections to moving troops into Camp, during the rainy season, are that it is disagreeable to the feelings, and injurious to the health. Under ordinary circumstances these objections are valid; but the change saves life, and prevents depression, when epidemic cholera prevails. This move ought not to be left to Regimental Authorities. During the present season, Fevers were unusually prevalent, in the 35th Regiment at Agra, before the Cholera appeared. There were 226 men in Hospital in Cantonments on the 10th August, before they were moved into Camp. After they returned to Cantonments on

the 31st, there were only 74, and none of the cases dangerous. This is important as indicating the proper treatment, in case the 35th should suffer severely from Fever, during September and October, in the same manner as the 42nd and 107th Regiments suffered last year.

As the movement of the Troops formed an important part of the treatment, I was directed, by His Excellency the Commander-in-Chief to forward my reports, of the progress of the disease, to him through the Brigadier Commanding the Agra district. I have in consequence in my final report, of which a copy is appended, brought to His Excellency's notice those Officers whose conduct attracted my favorable notice. The cordial co-operation, and practical information of Brigadiers Troup and Welchman, were of the greatest value, and their orders were promptly and efficiently carried out, by the Officers Commanding Corps, and the Commissariat Officers, who had considerable difficulty in overcoming obstacles in this emergency. The indefatigable zeal and the skill and the attention of all the Medical Officers, particularly those mentioned, called for my warm approbation, and I trust will meet with the favorable notice of His Excellency the Commander-in-Chief.

The accompanying Tables No. 1 and 3, show the daily progress of the disease in each Corps, Meteorological changes and fall of rain, and No. 4 is a monthly abstract for each Corps. No. 5 shows the results in each Corps during the attack. No. 6 is a Comparative Table of different epidemic attacks amongst the Europeans and Natives at Agra since the year 1837.

JOHN MURRAY, *M. D.*,  
*Deputy Inspector General of Hospitals,*  
*Agra Circle.*

*Agra, September 15th, 1862.*



## APPENDIX.

No. 210.

To

LIEUTENANT COLONEL JOHNSTONE,

*Officiating Adjutant General of the Army,*

*Simlah.*

SIR,

I have the honour to report for the information of His Excellency the Commander-in-Chief, the course, and termination, of the attack of Epidemic Cholera, in the stations of Agra, Gwalior, and Jhansie.

2. The disease was in a very intense form, some cases proving fatal in 5 or 6 hours. There was bilious vomiting and purging, like *European cholera*, both at Agra, and Gwalior in the early period of the attack. The removal from Cantonments to Camp was followed, in each instance, by immediate *diminution* of the cases of Cholera, and there was no *increase* of other forms of disease. The change was beneficial in H. M.'s 35th Regiment, which had suffered much from fever during the previous month. There were 226 men in Hospital, on the 10th August, previous to moving into Camp; and there were only 74 on the 31st, when they returned to Cantonments. The Native Champooers, who were employed in place of Europeans, in rubbing and attending on bad cases, were most useful and valuable.

3. At MOBAR, Gwalior, the disease appeared in the Artillery Division, on the 9th July, and in H. M.'s 13th Light Infantry on the 10th. Tents were immediately sent to the vicinity of the Phool Bagh, and to the Camp at Goorgaon. The disease increased in the Artillery, and the Troop of Horse Artillery removed to the palace in the Phool Bagh, on the 12th. And there was no fresh case of the disease here, and only one in Cantonments.

Officers, ... ..	12	
Men, ... ..	259	
Women, ... ..	26	
Children, .. ...	26	
	<hr/>	
	323	

4. There were only occasional cases (5) in H. M.'s 13th Light Infantry up to the 18th, when there were four fatal cases during the day, and four more during the night, (two of which proved fatal.) Two Companies from the infected barracks, moved to the Camp at Goorgaon, in the morning, and one Company in the afternoon of the 19th. There were three cases on the 19th, and the following day in the Camp, one of which proved fatal, and one in Cantonments, in the Quarter Master Serjeant, who visited on duty the vacant barracks. All these cases recovered. There was no fresh case till I returned to Agra, on the 28th. There was a recurrence of the disease on the 2nd August; when the remainder of the Corps removed into Camp; and there were occasional cases up to the present date, and there may be a few more. The mortality in H. M.'s 13th Light Infantry has been 34 men, 2 women, and 5 children, total 41, equal to 4.52 per cent. on the strength 907.

Officers, ... ..	26	
Men, ... ..	821	
Women, ... ..	26	
Children, ... ..	34	
	<hr/>	
	907	



The first case in the detachment of H. M.'s 52nd Regiment, in the fortress

Officer, ... ..	6	of Gwalior, appeared on the 29th July. It
Men, ... ..	285	became severe on the 2nd and 3rd, and they
Women, ... ..	19	moved into the Phool Bagh, and as the disease
Children .. ...	29	continued, they moved into Camp at Oody-
	<hr/> 289	pore, and changed camp on the neighbouring
		high ground. The last case was admitted on

15th August. The mortality has been, 19 men, two women, and three children, total 24, equal to 8.78 per cent. on the strength 289.

5. The loss at GWALIOR has been moderate; out of 1,315 men 55 have died, equal to 4.19 per cent. This favorable result arose from the cordial co-operation of Brigadier J. Welchman, C.B. and the prompt, and careful manner, in which his orders were carried out, and the spirit of the men, sustained by Colonel Lord M. Kerr, H. M.'s 13th, Light Infantry, and Colonel Knatchbull, Artillery Division, Major Bouchier, H. M.'s 52nd Light Infantry, and the activity, and facility in procuring supplies, of Captain Taylor, Assistant Commissary General. The lives of many, and the sufferings of all the sick were saved by the skill and unremitting attention, of Surgeon Hilliard of the Artillery Division, Surgeon Doherty and Assistant Surgeon Jackson, H. M.'s 13th Light Infantry, and Assistant Surgeon Park, H. M.'s 52nd Light Infantry. The assiduous attention of Mr. Apothecary J. Barley and Extra Assistant Steward J. Parker, H. M.'s 13th Light Infantry and Mr. Apothecary J. Hart, H. M.'s 52nd Light Infantry, were highly commendable.

6. At AGRA there were three cases in H. M.'s 35th Regiment on the 29th

Officer, ... ..	23	and 30th of June, one of which, Assistant Sur-
Men, ... ..	1108	geon Hill, proved fatal. Immediately on this
Women, ... ..	82	occurring, Tents and cots were sent to the
Child, ... ..	106	camping ground near the Taj and Secundra.
	<hr/> 1319	There was no fresh case till the 30th July
Total, ... ..		when it reappeared in this Regiment. On the

2nd and 3rd August, 11 cases were attacked, 10 of which proved fatal. Two Companies were moved to the Secundra Camp on the morning, and two to the Taj Camp on the evening of the 4th August. Two additional companies were sent to Secundra, and two to the Taj, on the 5th and 6th. In the Secundra camp there were five cases during the first three days, three of which proved fatal. The ground was changed on the 8th, and there was no fresh case for six days; till the detachment of convalescents joined, from Cantonments. There was one case on the 13th. Cases continued to appear till the 23rd. After which there was no fresh case. They returned to Cantonments on the 1st September.

In the Taj party there were only three cases, during the first three days; but four cases appeared on the 7th, and four on the 8th. They removed across the Jumna on the 9th. There were seven cases the following three days. They changed ground on the 13th, after which there were only two cases, and these were in convalescents who joined from Secundra, on the 17th. They changed ground on the 20th, 28th and 31st; and they returned to Cantonments on the 1st September.

As cases continued to appear in Cantonments, the convalescents and such of the sick as could be moved were sent to the Secundra Camp, on the 11th and 13th, and the remaining companies sent to Ram Bagh, on the 15th, leaving only twenty-five sick, and the women and children in Cantonments. Only one case appear in Cantonments after this date. The sick returned to Cantonments on the 28th and the Secundra party on the morning and the Ram Bagh party on the evening of the 1st September. The mor-



tality in H. M.'s 35th Regiment has been one officer, forty-nine men and one woman. Total 51, equal to 3·86 per cent on the strength of 1,319.

7. This satisfactory result is mainly attributable to the cordial co-operation and constant supervision of Brigadier C. Troup, C. B., and to the efficient manner in which his orders were carried into effect by Colonel Walter, and Lieutenant-Colonel Beamish, Her Majesty's 35th Regiment, and to the exertion of Captain Roberts, Deputy Assistant Commissary General, in procuring carriage and champooers. The zeal and attention to the comforts of the sick, of Surgeon Major J. W. Chambers, were unremitting, and highly valuable, as well as those of Assistant Surgeon J. C. Dickinson, in charge of the Secundra Camp, and Assistant Surgeon A. M. Tippetts, in charge of the Taj, and Ram Bagh Camps. Surgeon Major Chambers reports most favourably and deservedly, of the diligence, and ability of Mr. Apothecary J. Rehill, Mr. Steward T. M. Sullivan and Assistant Apothecary J. Baiker. In the Artillery Division there were several suspicious cases of

Officers, ...	...	...	4
Men, ...	...	...	74
Women, ..	...	...	6
Children, ...	...	...	16
Total, ...			100

Diarrhœa, which were checked in the earliest stage, by the prompt precautionary treatment assiduously adopted by Surgeon T. Maxwell, which stopped the disease in the bud, and prevented its spreading.

8. AT MUTTRA the disease was reported severe on the 22nd June, in a

Officers, ...	...	...	28
Men, ...	...	...	503
Women, ..	...	...	6
Children, ...	...	...	59
Total, ...			629

party of Pilgrims, twelve miles from the station. They were stopped, and put in Quarantine, till the disease disappeared. There were a few cases in the city of Muttra. There were several very suspicious cases of Diarrhœa, during the month of July, and August in H. M.'s

20th Hussars; but by the prompt exhibition of precautionary remedies, and assiduous care and attention of Surgeon Major C. L. Cox, H. M.'s 20th Hussars, the symptoms were checked, and the disease did not extend.

9. AT JHANSIE the first case appeared in H. M.'s 52nd Light Infantry on

Officers, ...	...	...	3
Men, ...	...	...	97
Women, ..	...	...	14
Children, ...	...	...	17
Total, ...			131

the 22nd July, and the last on the 15th August. The mortality in the Artillery Division was seven men, and one child. Total 8, equal to 6·10 per cent on the strength of 131. The mortality in H. M.'s 52nd Light Infantry was 29 men, one woman and four children. Total 34, equal to 4·77 per cent. on the strength of 712. I can only give a numerical statement regarding the course of the disease, as no other reports have been forwarded to me.

Officers, ..	..	...	17
Men, ...	...	...	600
Women, ..	...	...	33
Children, ...	...	...	57
Total, ...			712

10. The Native Troops in this Circle have not been affected, beyond one or two sporadic cases in some of the Corps. There were only ten fatal cases out of a strength of 10,004.

11. The prisoners in the various Jails have not been affected, with exception of those in the Central Prison at Agra, when the disease was speedily averted by 1,000 of the Prisoners being promptly moved into Camp, and precautionary remedies used by Dr. Plank, the Superintendent.

12. The loss in the Agra Circle during the attack has been 1 Officer,				139 men, 10 women and 14 children. Total 164,
Officers, ...	...	...	129	which is equal to 3·73 per cent. on the strength of 4,422.
Men, ...	...	...	3,697	
Women, ...	...	...	250	
Children, ...	...	...	346	
Total			4,422	

I have &c.,  
 JOHN MURRAY, *M. D.*,  
*Deputy Inspector General of Hospitals,*  
*Agra Circle.*

*Agra, 10th September, 1862.*

Memo. 1st November.—In addition to these, 3 men and 2 Children died in Her Majesty's 13th, and one man in the Artillery Division in the end of September, making the total deaths 170, equal to 3·84 per cent on the strength.

J. M.



Admissions and Deaths from Cholera and Diarrhoea amongst the Eur  
th of July 1862.

[illegible]Admitted in June 29<sup>th</sup>[illegible]





$\checkmark \pi \approx 2.$ 

Admissions and Deaths from Cholera and Diarrhoea amongst the Europeans at the Native Central Prison at Agra, during the month of August 1862.

[illegible]





No 3.

Daily Admissions and Deaths from Cholera and Diarrhoea during the month of September 1862.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Admitted.	Admitted.	Admitted.	Admitted.	Admitted.	Admitted.	Admitted.	Admitted.	Admitted.	Admitted.	Admitted.	Admitted.	Admitted.	Admitted.	Admitted.	Admitted.	Admitted.	Admitted.	Admitted.
Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.	Deaths.
Cholera.	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
Diarrhoea.	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
Cholera.	1	1	"	1	1	"	1	1	2	2	2	3	1	2	1	1	2	1
Diarrhoea.	"	"	1	"	"	"	1	1	3	1	1	2	4	5	4	"	3	1
Cholera.	"	"	"	"	"	"	"	"	1	"	1	"	"	"	"	"	"	"
Diarrhoea.	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
Cholera.	"	"	"	"	"	"	1	1	"	"	"	"	"	"	1	"	1	"
Diarrhoea.	"	1	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
Cholera.	1	1	"	1	1	"	1	1	3	3	1	2	1	1	1	1	2	1
Diarrhoea.	"	2	"	"	"	1	1	3	1	1	2	4	5	4	"	3	1	1
	N.	N.	N.	N.	"	S.E.	"	N.	N.	S.	N.E.	S.	W.	E.W.	"	"	"	S
	"	"	"	0.05	0.02	"	"	"	0.39	"	0.66	"	"	"	0.20	0.50	0.05	0.80
Max.	96	96	96	96	96	96	97	96	96	94	95	94	98	97	95	95	97	95
Min.	76	76	76	76	76	76	77	76	76	76	76	76	77	77	77	77	77	75
Max.	96	96	96	96	96	96	97	96	96	94	95	94	98	97	95	95	97	95
Min.	76	76	76	76	76	76	77	76	76	76	76	76	77	77	77	77	77	75
Max.	96	96	96	96	96	96	97	96	96	94	95	94	98	97	95	95	97	95
Min.	76	76	76	76	76	76	77	76	76	76	76	76	77	77	77	77	77	75

3 Cases were admitted from the Hospital in October on the 13, 14, and 19 - all of which recovered.





No. 4.

Admissions and Deaths from Cholera and Diarrhoea in the European Corps at Agra, and Jhansi, and in the Native Prisoners in the Central Prison Agra, in 1862.

Agra 1<sup>st</sup> November 1862

	Agra.		Jwalior.				Jhansi.				Agra.		Total.				Grand Total.		Remarks		
	H. M. <sup>s</sup> 35 <sup>th</sup> Regt		Artillery Division.		H. M. <sup>s</sup> 1/13 <sup>th</sup> L.I.		H. M. <sup>s</sup> 52 <sup>nd</sup> L.I.		Artillery 5/19 <sup>th</sup>		H. M. <sup>s</sup> 52 <sup>nd</sup> L.I.		Central Prison.		European Troops.		Native Prisoners.		Troops & Prisoners.		
Diseases.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	
Cholera.	1 <sup>+</sup>	1	"	"	1	"	"	"	"	"	"	"	"	"	2	1	"	"	2	1	*admitted
Diarrhoea.	"	"	"	"	1	"	"	"	"	"	"	"	"	"	1	"	"	"	1	"	
Cholera.	3 <sup>+</sup>	"	4	"	17	13	2	2	"	"	8	6	"	"	34	21	"	"	34	21	*2 admitted
Diarrhoea.	15	"	6	"	37	"	13	"	5	"	19	"	"	"	95	"	"	"	95	"	
Cholera.	"	"	5	3	"	"	"	"	"	"	2	1	"	"	7	4	"	"	7	4	
Diarrhoea.	"	"	"	"	1	"	"	"	"	"	"	"	"	"	1	"	"	"	1	"	
Cholera.	2	2	"	"	"	"	"	"	"	"	1	1	"	"	3	3	"	"	3	3	
Diarrhoea.	"	"	1	1	1	"	"	"	"	"	"	"	"	"	2	1	"	"	2	1	
Cholera.	"	"	"	"	"	"	1	"	"	"	"	"	"	"	1	"	"	"	1	"	
Diarrhoea.	"	"	"	"	2	"	1	"	"	"	"	"	"	"	3	"	"	"	3	"	
Cholera.	63	49	2	1	19	10	23	17	11	7	30	23	23	72	148	107	23	12	171	109	
Diarrhoea.	21	"	19	"	75	1	34	"	9	1	62	2	27	"	220	4	27	"	247	4	
Cholera.	2	1	"	"	2	1	2	2	1	1	"	"	"	"	7	5	"	"	7	5	
Diarrhoea.	1	"	"	"	1	"	"	"	2	"	"	"	"	"	4	"	"	"	4	"	
Cholera.	"	"	"	"	5	4	3	3	"	"	5	3	"	"	13	10	"	"	13	10	
Diarrhoea.	5	3	"	"	1	"	"	"	7	"	"	"	"	"	7	3	"	"	7	3	
Cholera.	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
Diarrhoea.	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
Cholera.	"	"	3	1	23 <sup>+</sup>	14	"	"	"	"	"	"	"	"	26	15	"	"	26	15	*admitted
Diarrhoea.	"	"	"	"	34	8	"	"	"	"	"	"	"	"	34	1	"	"	34	1	
Cholera.	"	"	"	"	1	1	"	"	"	"	"	"	"	"	1	1	"	"	1	1	
Diarrhoea.	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	
Cholera.	"	"	"	"	4	3	"	"	"	"	"	"	"	"	4	3	"	"	4	3	
Diarrhoea.	"	"	"	"	1	"	"	"	"	"	"	"	"	"	1	"	"	"	1	"	
Cholera.	1	1	"	"	1	"	1	"	"	"	"	"	"	"	3	1	"	"	3	1	
Diarrhoea.	"	"	"	"	3	"	1	"	"	"	"	"	"	"	4	"	"	"	4	"	
Cholera.	66	49	9	2	59	37	25	19	11	7	38	29	23	12	208	143	23	12	231	155	
Diarrhoea.	36	"	25	"	146	2	47	"	14	1	81	2	27	"	349	5	27	"	376	5	
Cholera.	2	1	5	3	3	2	2	2	1	1	2	1	"	"	15	10	"	"	15	10	
Diarrhoea.	1	"	"	"	2	"	"	"	2	"	"	"	"	"	5	"	"	"	5	"	
Cholera.	"	"	2	2	9	7	3	3	"	"	6	4	"	"	20	16	"	"	20	16	
Diarrhoea.	5	3	1	1	3	"	"	"	1	"	"	"	"	"	10	4	"	"	10	4	
Cholera.	69	51	16	7	72	46	31	24	12	8	46	34	23	12	246	170	23	12	269	182	
Diarrhoea.	42	3	26	1	134	2	48	"	17	1	81	2	27	"	368	9	27	"	395	9	
	23		12		26		6		3		17		"		87		"		87		
	1108		259		821		235		104		600		2667		3127		2667		5794		
	82		26		26		19		14		38		"		205		"		205		
	106		26		34		29		17		57		"		269		"		269		
	1319		323		907		289		138		712		2667		3688		2667		6355		
Cholera.	3.86		2.16		5.07		8.30		5.80		4.77		0.45		4.61		0.45		2.86		
Diarrhoea.	0.30		0.31		0.22		"		0.72		0.26		"		0.22		"		0.14		
Cholera.	73.91		43.75		63.89		77.47		66.66		73.90		52.17		69.10		52.17		67.65		
Diarrhoea.	9.52		3.84		1.29		"		5.88		2.47		"		2.44		"		2.28		

John Murray M. D.  
Dy. Inspector General of  
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No 5.

of Admissions and Deaths from Cholera and Diarrhoea, amongst the Europeans at Agra, Gwalior, and Jhansi, during the year 1862.

Agra 1<sup>st</sup> November 1862.

Strength.	Diseases.	Admitted.	Died.	Ratio per cent Deaths to.		Admitted from.			Date of.		Camp.	
				Strength	Admission	Barrack	Hospital	Camp.	1 <sup>st</sup> case.	Last case.	Moved into	Returned from.
23	Cholera.	1	1	4.35	100.00	1	"	"	29 <sup>th</sup> June.	29 <sup>th</sup> June.	4 <sup>th</sup> Augt.	1 <sup>st</sup> Sept.
	Diarrhoea.	"	"	"	"	"	"	"	"	"	"	"
1108	Cholera.	66	49	4.42	74.24	14	9	43	29 <sup>th</sup> June.	22 <sup>nd</sup> Augt.	4 Augt.	1 <sup>st</sup> Sept.
	Diarrhoea.	36	"	"	"	"	"	"	"	"	"	"
82	Cholera.	2	1	1.22	50.00	2	"	"	10 <sup>th</sup> Augt.	12 <sup>th</sup> Augt.	"	"
	Diarrhoea.	1	"	"	"	"	"	"	"	"	"	"
106.	Cholera.	"	"	"	"	"	"	"	"	"	"	"
	Diarrhoea.	5	3	2.83	60.00	"	"	"	"	"	"	"
12	Cholera.	"	"	"	"	"	"	"	"	"	"	"
	Diarrhoea.	"	"	"	"	"	"	"	"	"	"	"
259	Cholera.	9	2	0.77	22.22	8	1	"	19 <sup>th</sup> July.	8 <sup>th</sup> Sept.	12 <sup>th</sup> July.	1 <sup>st</sup> Augt.
	Diarrhoea.	25	"	"	"	"	"	"	"	"	"	"
26	Cholera.	5	3	11.54	60.00	5	"	"	10 <sup>th</sup> July.	13 <sup>th</sup> July.	"	"
	Diarrhoea.	"	"	"	"	"	"	"	"	"	"	"
26	Cholera.	2	2	7.70	100.00	2	"	"	9 <sup>th</sup> July.	9 <sup>th</sup> July.	"	"
	Diarrhoea.	1	1	3.85	100.00	"	"	"	"	"	"	"
26	Cholera.	1	"	"	"	1	"	"	20 <sup>th</sup> July.	20 <sup>th</sup> July.	19 <sup>th</sup> July.	1 <sup>st</sup> October.
	Diarrhoea.	3	"	"	"	"	"	"	"	"	"	"
821	Cholera.	59	37	4.50	62.71	15	10	34	9 <sup>th</sup> July.	18 <sup>th</sup> Sept.	19 <sup>th</sup> July.	1 <sup>st</sup> October.
	Diarrhoea.	146	2	0.24	1.36	"	"	"	"	"	"	"
26	Cholera.	3	2	7.69	66.66	2	"	1	6 <sup>th</sup> Augt.	6 <sup>th</sup> Sept.	6 <sup>th</sup> Augt.	1 <sup>st</sup> Oct.
	Diarrhoea.	2	"	"	"	"	"	"	"	"	"	"
34	Cholera.	9	7	20.59	77.77	9	"	"	6 <sup>th</sup> Augt.	27 <sup>th</sup> Sept.	"	"
	Diarrhoea.	3	"	"	"	"	"	"	"	"	"	"
6.	Cholera.	1	"	"	"	"	"	1	6 <sup>th</sup> Augt.	6 <sup>th</sup> Augt.	14 <sup>th</sup> Augt.	3 <sup>rd</sup> Sept.
	Diarrhoea.	1	"	"	"	"	"	"	"	"	"	"
235	Cholera.	25	19	8.08	76.00	4	5	16	25 <sup>th</sup> July.	14 <sup>th</sup> Augt.	14 <sup>th</sup> Augt.	3 <sup>rd</sup> Sept.
	Diarrhoea.	47	"	"	"	"	"	"	"	"	"	"
19	Cholera.	2	2	10.53	100.00	"	2	"	6 <sup>th</sup> Augt.	16 <sup>th</sup> Augt.	"	"
	Diarrhoea.	"	"	"	"	"	"	"	"	"	"	"
29	Cholera.	3	3	10.31	100.00	"	3	"	8 <sup>th</sup> Augt.	16 <sup>th</sup> Augt.	"	"
	Diarrhoea.	"	"	"	"	"	"	"	"	"	"	"
3	Cholera.	"	"	"	"	"	"	"	"	"	"	"
	Diarrhoea.	"	"	"	"	"	"	"	"	"	"	"
104	Cholera.	11	7	6.73	63.63	9	"	2	1 <sup>st</sup> Augt.	14 <sup>th</sup> Augt.	3 <sup>rd</sup> Augt.	3 <sup>rd</sup> Sept.
	Diarrhoea.	14	1	0.96	7.13	"	"	"	"	"	"	"
14	Cholera.	1	1	7.24	100.00	1	"	"	11 <sup>th</sup> Augt.	11 <sup>th</sup> Augt.	"	"
	Diarrhoea.	2	"	"	"	"	"	"	"	"	"	"
17	Cholera.	"	"	"	"	"	"	"	"	"	"	"
	Diarrhoea.	1	"	"	"	"	"	"	"	"	"	"
17	Cholera.	"	"	"	"	"	"	"	"	"	"	"
	Diarrhoea.	"	"	"	"	"	"	"	"	"	"	"
600	Cholera.	38	29	4.83	76.32	38	"	"	22 <sup>nd</sup> July.	16 <sup>th</sup> Augt.	3 <sup>rd</sup> Augt.	5 <sup>th</sup> Sept.
	Diarrhoea.	81	2	0.96	7.13	"	"	"	"	"	"	"
38	Cholera.	2	1	2.68	50.00	2	"	"	1 <sup>st</sup> Augt.	8 <sup>th</sup> Augt.	"	"
	Diarrhoea.	"	"	"	"	"	"	"	"	"	"	"
59	Cholera.	6	4	7.02	66.66	6	"	"	1 <sup>st</sup> Augt.	11 <sup>th</sup> Augt.	"	"
	Diarrhoea.	"	"	"	"	"	"	"	"	"	"	"
87	Cholera.	3	1	1.15	33.33	2	"	1	29 <sup>th</sup> June.	6 <sup>th</sup> Augt.	19 <sup>th</sup> July.	12 <sup>th</sup> October.
	Diarrhoea.	4	"	"	"	"	"	"	"	"	"	"
3,127	Cholera.	208	143	4.57	68.70	88	25	95	29 <sup>th</sup> June.	18 <sup>th</sup> Sept.	12 <sup>th</sup> July.	1 <sup>st</sup> Oct.
	Diarrhoea.	349	5	0.16	1.43	"	"	"	"	"	"	"
205	Cholera.	15	10	4.87	66.66	12	2	1	10 <sup>th</sup> July.	6 <sup>th</sup> Sept.	"	"
	Diarrhoea.	5	"	"	"	"	"	"	"	"	"	"
269	Cholera.	20	16	5.94	80.00	17	3	"	9 <sup>th</sup> July.	27 <sup>th</sup> Sept.	"	"
	Diarrhoea.	10	4	1.48	40.00	"	"	"	"	"	"	"
3,688	Cholera.	246	170	4.61	69.10	119	30	97	29 <sup>th</sup> June.	27 <sup>th</sup> Sept.	12 <sup>th</sup> July.	1 <sup>st</sup> Oct.
	Diarrhoea.	368	9	0.23	2.44	"	"	"	"	"	"	"

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No 6.

Table of admissions and Deaths from Cholera and Diarrhoea in the European Troops and prisoners at Agra in the years 1837-38-43-51-56-60-61 and 62. -  
Agra, the 17<sup>th</sup> September 1862.

Corps.	Strength.	Diseases. -	Admitted.	Died.	Date of		Ratio per cent Deaths to		Re
					First case.	Last case.	Strength.	Admissions	
Artillery	208	Cholera.	7	5	October	November.	2.44	77.43	
		Diarrhoea.	32	"	"	"	"	"	
European Regiment.	767	Cholera.	4	2	October.	November	0.26	50.00	
		Diarrhoea.	7	1	"	"	0.13	14.28	
Native & W. Corps.	3092	Cholera.	10	2	October	November	0.07	20.00	
		Diarrhoea.	42	1	"	"	0.03	2.38	
		Cholera.	"	"	"	"	"	"	
		Diarrhoea.	"	"	"	"	0.00	0.00	
Artillery	196	Cholera.	1	1	July	July	"	"	
		Diarrhoea.	4	"	"	"	"	"	
European Regiment.	687	Cholera.	9	5	March	May	0.74	55.55	
		Diarrhoea.	17	"	"	"	"	"	
Native Corps.	3099	Cholera.	104	42	March	July	1.35	43.61	
		Diarrhoea.	234	3	"	"	0.09	1.29	
		Cholera.	125	71	March	July	5.38	56.80	
		Diarrhoea.	399	127	"	"	9.85	31.83	
Artillery	173	Cholera.	11	5	August.	September	2.89	45.45	
		Diarrhoea.	1	"	"	"	"	"	
39 <sup>th</sup> Regiment.	1003	Cholera.	129	49	August	September	4.88	38.00	
		Diarrhoea.	82	"	"	"	"	"	
I. Regiment.	2942	Cholera.	13	6	August	August.	0.20	46.15	
		Diarrhoea.	"	"	"	"	"	"	
		Cholera.	61	28	August	September.	2.67	45.90	
		Diarrhoea.	50	2	"	"	0.19	4.00	
Artillery	95	Cholera.	1	1	24 <sup>th</sup> August.	24 <sup>th</sup> August.	1.05	100.00	
		Diarrhoea.	"	"	"	"	"	"	
European Regiment.	1048	Cholera.	27	6	10 <sup>th</sup> August	7 <sup>th</sup> September.	0.57	22.22	
		Diarrhoea.	9	"	"	"	"	"	
W. I.	3048	Cholera.	2	1	8 <sup>th</sup> August.	8 <sup>th</sup> August.	0.03	50.00	
		Diarrhoea.	10	"	"	"	"	"	
Prison.	2939	Cholera.	264	80	25 <sup>th</sup> July.	30 <sup>th</sup> August	2.72	30.30	
		Diarrhoea.	54	"	"	"	"	"	
Artillery.	95	Cholera.	24	14	22 <sup>nd</sup> June.	7 <sup>th</sup> July	14.73	58.73	
		Diarrhoea.	6	"	"	"	"	"	
European Regt	920	Cholera.	289	81	10 <sup>th</sup> June	9 <sup>th</sup> July.	8.80	28.00	
		Diarrhoea.	32	"	"	"	"	"	
W. I.	2942	Cholera.	73	34	4 <sup>th</sup> June	15 <sup>th</sup> July.	0.92	45.33	
		Diarrhoea.	26	"	"	"	"	"	
Prison.	3704	Cholera.	564	239	30 <sup>th</sup> May.	19 <sup>th</sup> July.	6.45	42.35	
		Diarrhoea.	160	"	"	"	"	"	
Artillery.	174	Cholera.	24	7	10 <sup>th</sup> August	12 <sup>th</sup> September.	4.03	29.16	
		Diarrhoea.	48	"	"	"	"	"	
Rifle Brigade.	1047	Cholera.	86	52	9 <sup>th</sup> August	30 <sup>th</sup> September	4.96	60.46	
		Diarrhoea.	1720	"	"	"	"	"	
Bat. W. I.	1419	Cholera.	47	18	12 <sup>th</sup> August	30 <sup>th</sup> September	1.26	38.30	
		Diarrhoea.	13	"	"	"	"	"	
Prison.	1997	Cholera.	816	175	10 <sup>th</sup> August.	30 <sup>th</sup> September	8.76	21.44	
		Diarrhoea.	203	"	"	"	"	"	
Artillery.	111	Cholera.	9	4	17 <sup>th</sup> July.	31 <sup>st</sup> July.	3.63	44.44	
		Diarrhoea.	15	"	"	"	"	"	
42 <sup>nd</sup> Highlanders.	672	Cholera.	54	40	21 <sup>st</sup> June.	8 <sup>th</sup> August.	5.95	74.07	
		Diarrhoea.	77	2	"	"	0.30	2.60	
107 <sup>th</sup> Regiment.	412	Cholera.	48	24	7 <sup>th</sup> July.	10 <sup>th</sup> August	5.82	50.00	
		Diarrhoea.	89	"	"	"	"	"	
Regiment N. I.	569	Cholera.	12	5	18 <sup>th</sup> July.	4 <sup>th</sup> August	0.87	41.66	
		Diarrhoea.	3	"	"	"	"	"	
Prison	2959	Cholera.	189	66	1 <sup>st</sup> July.	10 <sup>th</sup> August.	2.23	34.92	
		Diarrhoea.	81	1	"	"	0.03	1.23	
Madras Hospital.	3000	Cholera.	197	115	9 <sup>th</sup> June.	23 <sup>rd</sup> August.	3.50	58.37	
		Diarrhoea.	175	12	"	"	0.40	6.86	
Artillery Division.	78	Cholera.	"	"	"	"	"	"	
		Diarrhoea.	7	"	"	"	"	"	
35 <sup>th</sup> Regiment.	1131	Cholera.	67	50	29 <sup>th</sup> June.	23 <sup>rd</sup> August.	4.42	74.62	
		Diarrhoea.	"	"	"	"	"	"	
Regiment N. I.	601	Cholera.	1	"	29 <sup>th</sup> July.	29 <sup>th</sup> July.	"	"	
		Diarrhoea.	5	"	"	"	"	"	
Prison.	2667	Cholera.	23	12	10 <sup>th</sup> August.	18 <sup>th</sup> August.	0.45	52.17	
		Diarrhoea.	24	"	"	"	"	"	

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